

1 Introduction, Mandates, and Statement of Mission

1.1 Introduction: Wachusett, Unique Among MDC Watersheds

The Wachusett Reservoir was created in 1906 to augment supplies of clean drinking water for the ever-growing population in metropolitan Boston (Figure 1). It has been a source of drinking water continuously since 1907. Damming the south branch of the Nashua River in Clinton created the reservoir. With a 65 billion-gallon capacity, the Wachusett Reservoir was the largest reservoir in the world at the time that it was built (Massachusetts Board of Health 1895:129). The Reservoir has a surface area of approximately 6.5 square miles and is supplied by a 110-square mile watershed encompassing portions of 12 towns. In 1946, the Wachusett Reservoir was supplemented by the Quabbin Reservoir, due to ever-increasing demands for water from the continued growth of metropolitan Boston. Water travels from the Quabbin Reservoir via an aqueduct to the Wachusett Reservoir, continuing through the Cosgrove intake and on towards metropolitan Boston. In the three decades that separate the construction of the Wachusett and Quabbin Reservoir systems, the likelihood of development pressures around the reservoirs made it clear that long-term protection would require the purchase of a significant portion of the watershed. Unlike the largely protected Quabbin Watershed, the Wachusett Watershed was constructed without this lasting buffer. Aggressive and largely successful efforts have been made in recent years to correct this flaw in the system, and currently more than 25% of the Wachusett watershed is protected from further development. Nonetheless, enormous developmental pressures and more intensive use on privately owned lands within the Wachusett watershed continue to pose greater external water quality threats than on other MDC watersheds. This document outlines a Land Management Plan for protecting and managing MDC owned lands within the Wachusett Reservoir Watershed in the context of these pressures.

1.2 Agency Mission and Mandates

The Metropolitan District Commission (MDC), Division of Watershed Management (DWM), and the Massachusetts Water Resources Authority (MWRA) supply drinking water to 40 communities in the metropolitan Boston area as well as to several communities adjacent to MDC/DWM reservoirs. MDC/DWM is responsible for collection and safe storage of water, protection of reservoir water quality, and management of the watersheds. MWRA is responsible for treatment and transmission of the water supply.

The MDC/DWM manages the Wachusett Reservoir and associated watershed properties. The MDC is a multi-faceted state agency within the Executive Office of Environmental Affairs, and is charged with coordinating the enhancement of the quality of living within the metropolitan Boston area. Chapter 372 of the Acts of 1984 established the DWM and provided its primary mandate. Among other things, this act directed the Division to "...utilize and conserve...water and other natural resources in order to protect, preserve and enhance the environment of the commonwealth and to assure availability of pure water for future generations." In addition, the DWM was directed to periodically prepare watershed management plans that shall provide for "...forestry, water yield enhancement and recreational activities."

In order to meet the above legislative mandates, the DWM has established programs in Environmental and Water Quality, Engineering and Construction, Infrastructure Maintenance, Public Education, and Natural Resource Management. The long-term goals of the DWM are to:

- ◆ assure availability of clean water for present and future generations,
- ◆ effectively manage, protect, conserve and enhance the natural and structural resources under the responsibility of the DWM to ensure public health and safety,
- ◆ prevent adverse environmental impacts that could degrade watershed resources,
- ◆ provide educational programs in order to protect watershed resources,
- ◆ manage or conduct research that guides and assists the effective management of watershed resources,
- ◆ formulate emergency contingency plans that address existing and potential threats to DWM resources.

1.3 Plan Overview

The Division of Watershed Management's primary purpose is the long term protection and maintenance of water quality. Bearing this goal in mind, the land management plan was laid out to outline management objectives to establish and maintain the most effective and practical watershed cover in order to maximize the natural filtering capability of the lands surrounding the Wachusett Reservoir. The plan also identifies the need to protect lands through acquisition that are considered most sensitive with respect to protecting drinking water quality in the watershed. Other important natural and cultural resource components are incorporated into the plan, including wildlife and non-forested MDC land management.

This plan primarily focuses on management over the next ten years, but it also projects the forest cover and watershed conditions 60 years into the future. The importance of this long range view is that it plans for the future integrity of the "land/forest filter" in the face of such events as hurricanes, floods, fires, insect and disease outbreaks, environmental pollution, and other impacts unknown to managers today. The plan is written as an MDC/DWM guidance document for land management activities, and also will serve as a tool for involving the public in the development of land management objectives and strategies.

As with other Division land management plans, the Wachusett Plan calls for the maintenance of a species-diverse, multi-aged, multi-layered forest cover on much of the watershed. A significant difference between the Wachusett Reservoir watershed and the watersheds of the Quabbin Reservoir and Ware River is the regular interface that MDC lands have with private properties. Newly acquired properties must be managed not only from a water protection standpoint but also by taking into account such other factors as former property usage, wildlife considerations, and aesthetic and cultural resource values. This plan should be viewed as an "adaptive watershed management plan" to be applied but updated and modified as new properties are added and new information comes to light.

The plan itself includes sections on: 1) a Description of Wachusett Watershed Resources; 2) Research-based Principles Guiding Watershed Management; 3) a Statement of the Division's Watershed Management Goals; 4) Management Plan Objectives and Methods; 5) Research Needs; and 6) Public Involvement. The plan is written so that the management plan components are based on sections that precede them.

FIGURE 1. MDC/MWRA SYSTEM MAP

go to www.state.ma.us/mdc/WachusettLMPfig1.pdf (file size: 1.5 MB)